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EXAMINER	
HOSSAIN, TANIM M	
ART UNIT	PAPER NUMBER
2145	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/901,125	DEMOTO ET AL.	
	Examiner	Art Unit	
	Tanim Hossain	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 18-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-8, 10, 11, 14, 15, 16, 18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer (E.P. 0,848,560) in view of Mockett (U.S. 2001/0037359).

As per claim 1, Shaffer teaches a communication system comprising: an information server capable of performing communication in first and second communication modes (column 4, lines 4-27; where one remotely located site constitutes the information server from which the user obtains data; column 5, lines 44-52); a communication apparatus capable of performing communication in the first and second communication modes (column 3, lines 9-16; column 4, lines 4-27), the communication apparatus including: communication circuitry capable of performing communication with the information server in the first and second communication modes to receive information sent from the information server in response to an information acquisition request generated by the communication apparatus and communicated to the information server via the communication circuitry (column 4, lines 4-27; column 3, lines 21-25; where one remote site constitutes one user, and the node from which data is obtained is the information server, and the network administrator controls the information server); a connection

information storage section (column 6, line 56 – column 7, line 1; column 7, lines 20-28); a communication mode switching control section for controlling the switching of communication mode with the information server from the first communication mode to the second communication mode by storing into the connection information storage section connection information based on a condition of communication connection of the communication apparatus and the information server in the first communication mode at a time of the switching, releasing the connection of the communication circuitry with the information server in the first communication mode in a state in which a connection of the communication apparatus and the information server in the second communication mode is not established, establishing a connection with the information server in the second communication mode in a state in which a connection of the communication apparatus and the information server in the first communication mode is not established, and restoring the condition of communication connection, based on the stored connection information (column 3, lines 21-25; column 8, lines 3-22; column 10, lines 22-39, 55-59). Shaffer does not specifically teach that the communication apparatus is provided as an integrated unit. Mockett teaches a communication apparatus provided as an integrated unit and is capable of performing communication in different modes, which includes communication circuitry capable of performing communication with the information server to receive information sent from the information server in response to an information acquisition request generated by the communication apparatus and communicated to the information server via the communication circuitry (figures 2, 4); an output device for outputting information received from the information server (figures 2, 4); a connection information storage section (paragraphs 0025, 0057; where the history constitutes a storage

section); and restoring connection information based on a history (paragraphs 0025, 0057). It would have been obvious to one of ordinary skill in the art to include that the communication apparatus is an integrated unit that stores connection information and restores connection information based on the stored connection information, as taught by Mockett in the communication system of Shaffer, to arrive at the claimed system. The motivation for doing so lies in the fact that disposing the communication apparatus as a lone computer system with the mode switching functionalities would enable further efficiency in the system, such that all the functionalities are present in one unit, rather than in many different places, increasing portability of the system, for example. Both inventions are from the same field of endeavor, namely the communication over a network.

As per claim 2, Shaffer-Mockett teaches the communication system of claim 1, wherein the communication apparatus further includes a switching condition storage section for storing a predetermined determination reference value, and wherein the communication mode switching control section compares an amount of information to be acquired from the information server and the determination reference, and determines whether or not to execute switching of communication mode, based on a result of the comparison (Shaffer: column 8, lines 3-22, 37-45).

As per claim 3, Shaffer-Mockett teaches the communication system of claim 1, wherein the communication mode switching control section determines whether or not to execute the switching of communication mode, based on a kind of information to be acquired from the information server (Shaffer: column 3, lines 1-8; column 5, lines 53-55; where the medium based differences constitute switching by information type).

As per claim 5, Shaffer-Mockett teaches the communication system of claim 1, wherein the communication apparatus further includes a switching condition storage section for storing a time (Shaffer: column 7, lines 20-28), and wherein the communication mode switching control section compares a current time and the time stored in the switching condition storage section, to determine whether or not to execute the switching of communication mode (Shaffer: column 3, lines 24-26; column 7, lines 20-37).

As per claim 6, Shaffer-Mockett teaches the communication system of claim 1, wherein the communication mode switching control section determines whether to execute switching of communication mode or not, based on the operator's operation (Shaffer: column 11, line 34 – column 12, line 16; where the operator's choice of data implies a certain QoS, and when a suitable mode is found, the user chooses this, to initiate switching).

As per claim 7, Shaffer-Mockett teaches the communication system of claim 1, wherein when a communication mode switching instruction is received from the information server, the communication mode switching control section switches the communication mode, based on the switching instruction (Shaffer: column 3, lines 24-25; where the network administrator's switch constitutes a switching instruction from the information server).

As per claim 8, Shaffer-Mockett teaches the communication system of claim 7, wherein the communication apparatus transmits to the information server a signal representative of whether to transmit the communication mode switching instruction from the information server to the communication apparatus or not, based on the operator's operation (Shaffer: column 3, lines 24-25; column 6, lines 43-55; where the signal is inherently sent, by which the administrator can decide whether to switch modes by whether the QoS is met).

As per claim 10, Shaffer-Mockett teaches a communication system comprising: an information server capable of performing communication in first and second communication modes (Shaffer: column 4, lines 4-27; where one remotely located site constitutes the information server from which the user obtains data; column 5, lines 44-52); and a communication apparatus which is provided as an integrated unit and is capable of performing communication in the first and the second communication modes (Shaffer: column 3, lines 9-16; column 4, lines 4-27; Mockett: 0025, 0057), the communication apparatus including: communication circuitry capable of performing communication with the information server in the first and the second communication modes to receive information sent from the information server in response to an information acquisition request generated by the communication apparatus and communicated to the information server via the communication circuitry (Shaffer: column 4, lines 4-27; where one remote site constitutes one user, and the node from which data is obtained is the information server); a connection information storage section (Shaffer: column 6, line 56 – column 7, line 1; column 7, lines 20-28); a switching condition storage section for storing a reference value of an information transfer rate (Shaffer: column 6, lines 18-30); and a communication mode switching control section for, when the communication means is acquiring information from the information server in the first communication mode monitoring a rate of information transfer from the information server, comparing the information transfer rate being monitored and the reference value of the information transfer rate previously stored in the switching condition storage section, and in cases where the information transfer rate being monitored does not exceed the reference value, storing a condition of communication connection with the information server at that time into the connection information storage section as the

connection information, disconnecting the communication in the first communication mode in a state in which a connection of the communication apparatus and the information server in the second communication mode is not established, establishing a connection with the information server in the second communication mode to perform switching of communication mode in a state in which a connection of the communication apparatus and the information server in the first communication mode is not established, and restoring the communication connection condition based on the connection information stored in the connection information storage section when the communication in the first communication mode is disconnected (Shaffer: column 6, lines 18-55; where the switching constitutes the disconnection from the first communication mode).

As per claim 11, Shaffer-Mockett teaches a communication system comprising: an information server capable of performing communication in first and second communication modes (Shaffer: column 4, lines 4-27; where one remotely located site constitutes the information server from which the user obtains data; column 5, lines 44-52); and a communication apparatus which is provided as an integrated unit and is capable of performing communication in the first and the second communication modes (Shaffer: column 3, lines 9-16; column 4, lines 4-27; Mockett: 0025, 0057), the information server including: communication means capable of performing communication with the communication apparatus in the first and the second communication modes (Shaffer: column 4, lines 4-27; where one remote site constitutes one communication apparatus, and the node from which data is obtained is the information server); a switching condition storage section for storing a predetermined reference value of an information transfer rate (Shaffer: column 6, lines 18-30); and a communication

mode switching control section for, when the communication means is transferring information to the communication apparatus in the first communication mode, monitoring the information transfer rate, comparing the information transfer rate being monitored and the reference value of the information transfer rate previously stored in switching condition storage section, and in cases where the information transfer rate being monitored does not exceed the reference value, causing the communication means to transmit a communication mode switching instruction to the communication apparatus (Shaffer: column 6, lines 18-55; where the switching constitutes the disconnection from the first communication mode), and the communication apparatus including: communication means capable of performing communication with the information server in the first and the second communication modes to receive information sent from the information server in response to an information acquisition request generated by the communication apparatus and communicated to the information server via the communication circuitry (Shaffer: column 3, lines 9-16; column 4, lines 4-27); a connection information storage section for storing a communication connection condition as connection information (Shaffer: column 6, line 56 – column 7, line 1; column 7, lines 20-28); and a communication mode switching control section for, when the communication means receives the communication mode switching instruction causing a condition of communication connection with the information server at that time to be stored in the connection information storage section as the connection information, based on the switching instruction, disconnecting the communication in the first communication mode in a state in which a connection of the communication apparatus and the information server in the second communication mode is not established, establishing a connection with the information server in the second communication mode to perform switching

of communication mode in a state in which a connection of the communication apparatus and the information server in the first communication mode is not established, and restoring the communication connection condition based on the connection information stored when the communication in the first communication mode is disconnected (Shaffer: column 6, lines 18-55; where the switching constitutes the disconnection from the first communication mode; column 3, lines 21-25; column 10, lines 55-59; column 12, lines 10-15).

As per claim 14, Shaffer-Mockett teaches the communication system of claim 1, wherein after a predetermined time has elapsed since the information acquisition in the second communication mode is completed, the communication mode switching control section automatically disconnects the communication in the second communication mode, and again establishes a connection with the information server in the first communication mode to perform switching of communication mode (Shaffer: column 3, lines 21-26; where the link failure constitutes the completion of the acquisition of information in the second mode, and the reconnection constitutes a reconnection into the first mode).

As per claim 15, Shaffer-Mockett teaches a communication apparatus for communicating with an information server using different communication modes, the communication apparatus comprising: a communication section for establishing communications with the information server in the different communication modes to receive information sent from the information server in response to an information acquisition request generated by the communication apparatus and communicated to the information server via the communication circuitry (Shaffer: column 4, lines 29-45); a storage section (Shaffer: column 9, lines 1-5); and a communication mode switching control section for controlling the switching of communication modes with the

information server by storing connection information into the storage section based on a communication connection condition of the communication apparatus and the information server in a current communication mode, releasing the communication connection with the information server in a state in which a connection of the communication apparatus and the information server in the second communication mode is not established, and establishing a communication connection with the information server in another mode in a state in which a connection of the communication apparatus and the information server in any communication mode is not established and restoring the communication connection condition based on the stored connection information, wherein the communication section, the storage section, the output device, and the communication mode switching control section are embodied in a portable terminal (Shaffer: column 4, lines 29-45; Mockett: 0025, 0057).

As per claim 16, Shaffer-Mockett teaches the communication apparatus of claim 15, wherein the connection information comprises a URL (Mockett: 0025, 0057).

As per claim 18, Shaffer-Mockett teaches the communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based on an instruction signal from the information server (Shaffer: column 4, lines 29-45).

As per claim 20, Shaffer-Mockett teaches the communication apparatus of claim 15, wherein the communication mode switching control section controls the switching in accordance with a type of information to be acquired from the information server (Shaffer: column 5, lines 53-55).

As per claim 21, Shaffer-Mockett teaches the communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based at least in part on communication charges (Shaffer: Abstract).

As per claim 22, Shaffer-Mockett teaches the communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based on comparison between a current time and a specified time (Shaffer: column 7, lines 20-28).

As per claim 23, Shaffer-Mockett teaches the communication apparatus of claim 15, wherein the communication mode switching section controls the switching based at least in part on an operator's instruction (Shaffer: column 8, lines 26-29).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer-Mockett in view of Kunz (U.S. 6,223,221).

As per claim 4, Shaffer-Mockett teaches the communication system of claim 1, wherein the communication apparatus includes a switching condition storage section (Shaffer: column 4, lines 44-52), and wherein when an information acquisition request is received from the operator, the communication mode switching control section measures a parameter, and determines whether to execute switching of communication mode or not based on the measured parameter for the communication connection times in the first and second communication modes, respectively, previously stored in the switching condition storage section (Shaffer: column 6, lines 18-55). Shaffer-Mockett does not specifically teach that the measured parameter is the connection time. Kunz teaches an intelligence tool in a web browser that measures download and connection time to perform a certain task (column 2, lines 8-34). It would have been

obvious to one of ordinary skill in the art to include the tool to measure connection time into the QoS monitoring device, in which modes are switched based on whether the Qos is met, as taught by Kunz in the system of Shaffer-Mockett. The motivation for doing so lies in the fact that adding the parameter of connection time would allow for modes to be discriminated by this parameter, further diversifying the invention. Connection charges are often incurred by connection time, and thus the inclusion of this component would account for this fact, allowing the system to choose a cheaper mode for information transfer. All inventions are from the same field of endeavor, namely the efficient transfer of data through a network.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer-Mockett in view of Watson (U.S. 6,631,409).

As per claim 9, Shaffer-Mockett teaches the communication system of claim 1, but does not specifically teach the user's ability to override switching instructions from the information server. Watson teaches the user's ability to override default network settings (column 10, lines 27-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the ability of a user to override the instruction from the information server, based on his/her preference, as taught by Watson in the system of Shaffer-Mockett. The motivation for doing so lies in the fact that allowing the user to ultimately control his/her preferences for communication modes gives the user a further degree of freedom to add further efficiency and ease of use to the invention. All inventions are from the same field of endeavor, namely the efficient use of network resources to allow for data transportation.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer-Mockett in view of Davis (U.S. 5,583,922).

As per claim 12, Shaffer-Mockett teaches the communication system of claim 1, but does not specifically teach the automatic disconnection of a communication mode, after the information acquisition in this mode has been completed. Davis teaches the switching from a data transmission back to voice mode in a communication system, once the data transmission is completed (column 7, lines 19-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the ability to automatically return to a first mode after the use of the second mode has been completed, as taught by Davis in the system of Shaffer-Mockett. The motivation for doing so lies in the fact that there exists a need for the connection to revert back to its default node, in a situation where connection to a second node must be paid for, for example. To avoid overcharging, it is necessary for the mode to revert to the default mode after the task in the second mode is completed, so that there is no unnecessary connection time to the second mode. All inventions are from the same field of endeavor, namely the use of a communication system employing different methods of communication.

As per claim 13, Shaffer-Mockett teaches the communication system of claim 1, and teaches that the instruction to switch the communication mode can come from the information server (Shaffer: column 3, lines 21-25). Shaffer-Mockett does not specifically teach the automatic disconnection and switching from a second communication mode to a first communication mode, triggered by the information server. Davis teaches the switching from a data transmission back to voice mode in a communication system, once the data transmission is completed (column 7, lines 19-45). It would have been obvious to one of ordinary skill in the art

to include the ability to automatically return to a first mode after the use of the second mode has been completed, triggered by the information server, as taught by Davis in the system of Shaffer-Mockett. The motivation for doing so lies in the fact that there exists a need for the connection to revert back to its default node, in a situation where connection to a second node must be paid for, for example. To avoid overcharging, it is necessary for the mode to revert to the default mode after the task in the second mode is completed, so that there is no unnecessary connection time to the second mode. All inventions are from the same field of endeavor, namely the use of a communication system employing different methods of communication.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer-Mockett in view of McLain (U.S. 6,493,758).

As per claim 19, Shaffer-Mockett teaches the communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based on a comparison (Shaffer: column 2, lines 13-58). Shaffer-Mockett does not specifically teach that this comparison is performed as a limit of a data amount to be acquired. McLain teaches the placing of a limit of data to be downloaded from the information server, such that if it exceeds a reference value, discontinuation will take place (column 7 line 32 – column 8 line 6).. It would have been obvious to one of ordinary skill in the art at the time of the invention to place a download limit on a certain mode and switch to another once this limit has been met, as taught by McLain in the system of Shaffer-Mockett. The motivation for doing so lies in the fact that placing a limit on a download will enable tariffs to be controlled, in the case that after a certain amount, the tariff increases. With the obvious modification, switching may take place before the

increase, for the consumer to enjoy lower tariffs without concerns of time limitation online. All inventions are from the same field of endeavor, namely the efficient transfer of information thorough a network.

Response to Arguments

Applicant's arguments filed on November 28, 2006 have fully been considered.

a. The rejection under 35 U.S.C. Section 112, first paragraph is hereby withdrawn.

b. Arguments regarding claims 1, 10, 11, and 15, and claims dependent upon those arguments, are respectfully traversed by the new grounds of rejection.

c. Regarding the discussion of claim 2, QoS is dependent on many factors, including an amount of data (through transmission speed, for example) to be downloaded. As such, the amount of data to be acquired is compared to a reference value to make switching decisions. If there is a certain QoS rating in Shaffer, it corresponds to an amount of data that can be provided to the user, and through it, a decision to switch or remain with the connection takes place. As such, Shaffer-Mockett teaches the limitation as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanim Hossain whose telephone number is 571/272-3881. The examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571/272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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